

UGIC Breakout Sessions 2008

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2008 Breakout Presentations:

Title: A Top Ten Issues Briefing; GIS Opportunities and Coordination Issues

Presentors: Dennis Goreham, AGRC

Description: There will be speakers on various topics of interest to the Utah GIS community. Topics will include: emerging national standards, future of the National Agriculture Imagery Program (NAIP), municipal boundary update initiative, The Federal Lands Asset Inventory Reform (FLAIR) Act, IS Professional certification, Census programs, The National Geospatial Programs Office, Data Preservation and Archive Initiative, Renewable Energy data, ….

Title: ArcGIS Server Showcase

Presentors: Steve Gourley, AGRC

Description: This session will focus on a selection of ArcGIS Server applications and web services available; what AGRC has been working on, and what is available to the Utah GIS community. Applications shown will include spatial editing through a browser, spatial analysis, database population, role based security, and form generation. Available web services will be listed and demonstrated as well as talk

Title: Automating Natural Resources Inventory Tool

Presentors: Ryan Pierce, Natural Resources Conservation Service

Description: The USDA Natural Resources Conservation Service (NRCS) in Utah is in the process of developing a methodology for applying GIS technology in mapping resource concerns in order to generate natural resource inventory reports. These reports will be used in project funding rankings, conservation planning, state-level resource planning processes, goal-setting, coordination with other agencies, and other applications for resources data and maps. The inventory tool will be easy to use, will reduce time spent by employees on data collection, and will increase the accuracy of NRCS processes that use geodata.

Title: Building a Web-Based GIS and Work Order System - One District's Perspective

Presentors: Richard King, PE - Caldwell Richards Sorensen, inc

Description: The Central Utah Water Conservancy District has recently begun an intense effort to develop its GIS system and the tools necessary which will allow users within the District to easily access its data. The District has created a web-based system which utilizes ArcGIS Server, ASP.NET, and MySQL. In addition to using the system as a way to view geographic data, this system also includes a work order tracking system which allows management to set up tasks that need to be completed. Another challenge the District has faced is the high volume of Blue Stakes marking requests that come in each day. This system automates the process of retrieving the request, creating a work order from it, and creating a map of the request, includes the locations of the District's infrastructure. In addition to the creation of this new system, the District has come up with an innovative strategy for creating and assigning asset IDs to each asset. This method works for all types of assets and provides a significant amount of information about each asset simply from the ID, which is important given the large amounts of assets the District owns. We will explain how the system was built, how the various pieces of technology interact, and will provide lessons learned.

Title: Building and Publishing Geoprocessing Models with ArcGIS Server

Presentors: Jeremiah Lindemann, ESRI Denver

Description: ArcGIS Desktop users can build workflows using ModelBuilder to help automate their work. These models can make use of hundreds of geoprocessing tools as well as custom tools. You can also take these models and publish them to ArcGIS Server as Geoprocessing services. These services can then be run by anyone via a variety of clients such as Web Mapping applications, ArcGIS Explorer or ArcGIS Desktop. This presentation will give a very brief overview

on how to publish Geoprocessing models as ArcGIS Server services. The basic workflow and knowledge needed to publish a model will be provided. Attendees should have familiarity with ArcToolbox and using Geoprocessing tools. Title: Cadastral Information Management

Presentors: Heather Paskevic, ESRI

Description: The Cadastral Editor is a solution built for surveyors and cadastral land management organizations that want a spatially accurate GIS. This presentation will introduce how to leverage the cadastral editor functionality to improve the accuracy of your data, improve the efficiency of your workflow, improve the spatial location of associated data layers, and integrate parcel data from electronic XML or CAD files. Title: Challenges to Modeling the Real World in Cadastral GIS

Presentors: Van O'Brien, Sidwell Co.

Description: Data modeling in a cadastral GIS has always presented unique challenges in balancing the efficiencies of map maintenance against data that best represents the phenomena in the real world. This presentation will describe some of these challenges, like dealing with coincident boundaries, vertical parcel models (i.e. condominiums), COGO entry and dimensioning, and how to model your data and maintenance workflows to meet them head on. Van O'Brien from The Sidwell Company will also show examples from various counties across the country in how they address these issues. It is our hope that attendees look at common data modeling challenges with a new or different perspective.

Title: Discussion on the pros and cons of using Latitude and Longitude for official situs addresses.

Presentors: Benjamin B Clement

Description: There is growing support for using Latitude and Longitude for official situs addresses. When it comes to addresses, most people hold rather strong feelings on the topic although most do not have the benefit of years of experience with and understanding of the technical issues involved. Drop by and share in a discussion with your peers concerning ideas, experience, and opinions on a possible new addressing system from a perspective that is "inside" the industry. It should, at a minimum, prove to be entertaining.

Title: The Future of NAIP

Presentors: Kent Williams, USDA APFO

Description: Since 2003, The National Agricultural Imagery Program has provided the USDA Farm Service Agency (FSA) and cost share partners a means of acquiring low cost digital ortho imagery that is delivered within 30 days of acquisition. For 2008, several changes in the program are being made, including transitioning to a 3 year acquisition cycle, and collecting only 1 meter resolution imagery. Cost share opportunities include expanding coverage beyond the agricultural land that is the basis of FSA requirements, and "buying up" to a multi-spectral, or "4 band" product.

Title: Geocoding

Presentors: Heather Paskevic, ESRI

Description: Geocoding is the process of assigning a location, usually in the form of Coordinate values, to an address by comparing the descriptive location elements in the address to those present in the reference material. This technical session will start by exploring the necessary components and requirements of a successful geocoding workflow. This includes obtaining and standardizing reference data and address locators. Wrap up will include a brief introduction to creating and using geocoding services within web mapping applications.

Title: GIS for the Uninitiated

Presentors: Benjamin B Clement

Description: Find yourself asking questions like the following:

"I keep hearing about GIS but what is it really?"
 "How do I get started?"
 "Lots of folks are doing GIS but will it really help me?"
 "I really need GIS but how can I afford it?"

Stop by for a beginner-friendly discussion of what GIS is, why you need it, and how to get started. We will look at resources that are available, skills you will need to learn, and mistakes that you really don't need to repeat as they have already been thoroughly tested. I will be saving a few minutes for your questions so please bring one or two. And don't worry, they will not be graded.

We will take a step back from the GIS trees to take a broad look at the GIS forest. Concepts will be illustrated with a program that is free for all to use. Discussions will take place in language that everyone can understand. And after a brief discussion of what GIS is, we will be focusing on how it can be of real value to you. After all, if GIS can't benefit

you, why should you care about it?

Title: GIS for Utility Notification in Utah

Presentors: James Wingate, Blue Stakes of Utah

Description: Blue Stakes of Utah is the organization to "call before you dig" to get utility lines marked prior to excavating in Utah. Blue Stakes is a non-profit organization that acts as a communication link between excavators and 450+ member utility owners. Information about the excavation is captured and provided to the utility owners so they can mark their underground pipes and cables at the site to reduce the risk of them being damaged during the excavation.

Over 370,000 requests to dig were received in 2007, which included everything from new housing construction to pipeline maintenance to oil & gas exploration. Blue Stakes uses a statewide base map to locate the excavation site and determine which utility owners have underground facilities in the area. In October 2007, Blue Stakes completed the transition from using GIS data purchased from a commercial vendor to data provided entirely by local, state, and federal GIS departments in Utah. If you are a data producer, you may be interested to see how your data is being used to help Blue Stakes provide utility notification services at its most efficient and accurate level to date.

Title: GIS Management (Isn't knowing where it's at, enough?)

Presentors: Don Wood, Wasatch County

Description: What is the difference between being a GIS practitioner and being a GIS manager? While many of us have been taught how to be effective as GIS practitioners, what do we know about how to manage a GIS operation? Managing a GIS operation is much more than just overseeing geospatial data and output generation. It involves working with the IT managers, budget officers, and the organization's management not to mention serving our customers. This presentation will discuss ideas about how to effectively manage a GIS operation as well as provide a forum for willing participants to share their ideas and experiences.

Title: GIS Portal

Presentors: Steve Gourley and Bert Granberg, AGRC

Description: This presentation will demonstrate some of the functionality contained in the Utah GIS Portal and, hopefully, convince everyone to increase their level of participation on the site. The portal was built by a partnership of AGRC, UGIC and GISAC and aims to be a 'one-stop shop' for Utah GIS information, data, and events for all members of the Utah GIS Community. We'll discuss thoughts on future direction for the portal and more importantly take questions and input from the audience.

Title: Learning to Use LiDAR Data

Presentors: Jeannie Watanabe, AGRC

Description: LiDAR data for significant areas in Utah has recently been acquired. This session will be introduced with a brief summary of what LiDAR is. Then a panel of presentors who have experience in using LiDAR will speak to the work they have done, the tools used and what they have learned about using LiDAR data. We hope this session will stimulate discussion and give you ideas on how LiDAR data might help you in your work.

Title: Local GIS Planning

Presentors: Michael Turner

Description: GIS Strategic Planning isn't just for the state & regional level. Needs assessment and implementation planning are critical to the success of GIS at the municipal, county, and local levels. This session will include a presentation and discussion on how to plan at the local level for more effective GIS.

Title: Line-of-Site Visualization Strategies

Presentors: Dr. Jed Marti, Artis LLC

Description: Line-of-sight computations over terrain are important for computer simulation, and optimizing viewing sites and radio frequency communications. These tasks are important for homeland security, positioning sensor networks and analyzing GPS responses. This talk will examine the task and how best to visualize the results. We'll conclude with a demonstration using the new 2 meter LiDAR data from Utah's AGRC.

Title: MAF/TIGER Modernization and Census 2010

Presentors: James Castagneri, US Census Bureau

Description: The recent MAF/TIGER modernization effort at the US Census Bureau has resulted in a dramatic change in the positional accuracy of TIGER road data. How will this affect current and future participant programs such as the Local Update of Census Addresses, and the Census Tract Program? As more local governments move toward enterprise GIS, how can local officials be prepared to work with Census demographic and TIGER data? This session will discuss the future for the 2010 census and the benefits of utilizing the vast data provided by the nation's premier data collection agency.

Title: Making Labels Work for You in ArcMap

Presentors: Andrea Douglas, Ogden City

Description: Labels are a critical part in effectively communicating the message of any map. Labels are also one of the most challenging and time consuming parts of the map making process. This session will focus on several techniques that will help save time and frustration when dynamically labeling features in ArcMap. Using both the standard labeling engine and Maplex, labeling techniques will be discussed including: using the labeling toolbar and the label manager, changing label properties, creating label classes, using labeling expressions and saving text symbols to styles. These tools allow for more control over the placement and appearance of labels, which will help produce a more visually appealing and useful map.

Title: Maplex Getting Started & Google SketchUp: Implementation of 3D modeling in GIS

Presentors: Paul G Damron & Kyle Beckstrand (Southern Utah U

Description: Two short presentations will be held in this room. Maplex: Getting Started

Show individuals how to get started using this unique labeling feature ESRI provides with ArcMap. A short presentation on different ways to use Maplex by stepping through key features within the Maplex extension.

Google SketchUp: Implementation of 3D modeling in GIS.

3D-Modeling with Google SketchUp. These models can then be displayed in the ArcScene environment to create spatially correct 3D models. The presentation will focus on how these programs can work together to create lifelike structures, and then place them in a GIS environment. Presentation will center on an SUU campus model that I am currently working on for my Senior GIS Capstone project.

Title: National Geodetic Survey – a Geodetic Update

Presentors: William Stone, NOAA/ National Geodetic Survey

Description: This presentation will discuss the status of geodetic products and services and the positioning infrastructure provided by NOAA's National Geodetic Survey (NGS). NGS's primary responsibility is to provide the National Spatial Reference System, which serves as the nationwide positional framework for geospatial and related data. Presentation topics will include the nationwide network of GPS Continuously Operating Reference Stations, the Online Positioning User Service, the 2007 NAD83 readjustment, as well as other geodetic data offerings and services available from NGS.

Title: Pictometry -- Salt Lake County's Experience

Presentors: Jarom Zenger, Salt Lake County Assessor's Office

Description: Everyone has seen ortho Images (straight Down) but have you explored the option of Oblique images? Or do you ask yourself, "do I even know what Oblique means"? See what it means as a representative from Salt Lake County shows off the newly acquired Oblique and Ortho Images of their county and the program EFS (Electronic Field Study) that makes it possible. Pictometry's EFS program allows you to overlay and query shape files and SDE layers for quick image analysis at all angles. Pictometry's images and Software have been in use in several counties throughout Utah for a couple of years now and Salt Lake County didn't want to be left behind and neither will you.

Title: Parcel Genealogy How to Trace a Parcel's Lineage

Presentors: Van O'brien, Sidwell Co.

Description: The process of tracing these parcel lineages has traditionally been a challenge. We'll demonstrate an approach that ties the process of tracking parcel genealogy into the established workflows of cadastral map maintenance in ArcGIS 9.2 and integrated with tax/CAMA workflows, for lineage update and retrieval. We will incorporate these workflows with spatial tools that allow for the recovery of historical parcel geometry from the versioned geodatabase in ArcGIS.

Title: Programatically creating your own web service with ArcGIS Server

Presentors: Jeremiah Lindemann, ESRI Denver

Description: ArcGIS Server provides the ability to create many services out of the box that you can deliver such as Map, Geocoding and Geoprocessing services. However, in many cases users or other developers may want to gather simple information that doesn't have a visual component. Often times these users are non-gis users that want geographic information, but need to rely on GIS to do the calculations. For example, if someone wants to enter an address, how can you give them back all associated attributes from your parcel fabric at that address? The person

entering the address may need some simple attributes and may not necessarily need a map back. Creating these type of web services can increase your productivity by putting GIS in the hands of other developers that may request it. This presentation will demonstrate how you can create your own web service that other developers can then use. The presentation will discuss programming in detail and is intended for developers who have worked with either the Web ADF or ArcObjects, however non-programmers are welcome to understand what can be done as many people don't recognize the power in creating your own web-services. Title: Public Involvement and GIS

Presentors: Thomas McMurtry

Description: GIS is a valuable tool to enhance public participation efforts. It allows stakeholders and the public at large to understand and discuss complex issues that result better informed decision making processes. With public participation required as part of many projects, the use of GIS as a technical tool is essential. This presentation will illustrate InterPlan's efforts to use GIS in the public involvement setting so that it is meaningful for consultants, stakeholders and individual members of the public.

Title: Rapid Response Team (GIS Corps) -- Be part of creating the foundation for this team

Presentors: Kevin Sato, Kate Smith, and Jannie Watanabe -- a pannel

Description: Learn how you can use your GIS skills as part of the team responding to an emergency. What are the basic requirements and how can you get involved. This is an opportunity to ask questions and exchange ideas.

Title: Recently Aquired Pictometry

Presentors: Jerom Zenger, Salt Lake County Assessor's Office

Description: Everyone has seen ortho Images (straight Down) but have you explored the option of Oblique images? Or do you ask yourself, "do I even know what Oblique means"? See what it means as a representative from Salt Lake County shows off the newly acquired Oblique and Ortho Images of their county and the program EFS (Electronic Field Study) that makes it possible. Pictometry's EFS program allows you to overlay and query shape files and SDE layers for quick image analysis at all angles. Pictometry's images and Software have been in use in several counties throughout Utah for a couple of years now and Salt Lake County didn't want to be left behind and neither will you.

Title: Rethinking GIS Education, What should we teach?

Presentors: Brandon Plewe, PHD, BYU

Description: We are all aware of how rapidly technology changes, and how difficult it is to keep up with the skills necessary to be successful in a GIS career. This open forum will allow employers to discuss with college and university faculty what they would like to see from graduating GIS majors, now and in the future. Topics discussed could include technical GIS skills, IT (web, database) skills, business/interpersonal skills, as well as the intangibles. This is a chance to have an impact on future employees.

Title: Salt Lake Community College Gets In Step with GIS

Presentors: Dorleen Jensen, Salt Lake Community College

Description: The Salt lake Community College GeoScience/GIS Department would like to take this opportunity to acquaint you with its accomplishments and goals in GIS.

Examples of student projects will demonstrate the breadth of GIS application and potential in the education community.

Discussion will invite participation pertaining to the role of SLCC with the GIS professional community as we strive to prepare students for the work force, thus defining and refining the mutual roles of the college and the community.

Title: Selecting the Best Imagery for Your Company

Presentors: Anne Marie Nielson, Olympus Aerial Surveys

Description: This workshop will help attendees be better informed when obtaining and using aerial imagery for GIS.

Addressing common questions: What is orthophotography? What pixel size should be used? What accuracy do I need?

Do I want my flight in the spring or fall? What else do I need to consider as I decide on the best imagery for my company?

Title: Setting up Centerlines for Geocoding (and Ideas for Programmatically Improving Results)

Presentors: Roger Dunn

Description: I have developed a standard methodology for setting up street centerlines for geocoding purposes. It's a standard that goes beyond a database schema. Come see what Orem is doing to acheive high-percentage address hits.

If you are developing geocode data and/or software for your organization, then you'll benefit from these techniques that you really can implement in your projects.

Title: Sneak peak at the ArcGIS Server 9.3 JavaScript and REST APIs

Presentors: Jeremiah Lindemann, ESRI Denver

Description: ArcGIS Server 9.3 introduces new REST and JavaScript APIs that will dramatically simplify your development experience and enable you to quickly deliver fast and user-friendly mashup GIS Web applications. This presentation will show by samples how easy it is to create a web application that utilizes the new APIs. Any person interested in serving their GIS data via the web is welcome to attend. A brief overview of the ArcGIS Server architecture will be presented before discussing the new APIs. Other enhancements at ArcGIS Server 9.3 will be briefly discussed toward the end of the discussion.

Title: Spatial IM - A New Extension for ArcGIS

Presentors: Neal Fraser, Gateway Mapping inc.

Description: As a very flexible and robust addition to the group of extensions available for ArcGIS, Spatial IM delivers the powerful ability to maintain history, automatic time based updates, multiple hotlinks, and automated field calculations with map features. Additionally, it easily synchronizes multiple editors and reduces error introduced in the data entry process. Come see how this exciting tool is implemented in public works, asset management, planning, and project management applications. You will also see how you can more easily put the power of GIS into the hands of those you work with who are not GIS professionals.

Title: TURNGPS for Real Time GIS Collection and Navigation

Presentors: Sean A. Fernandez, AGRC and Tom Wussow, Monsen Engineering

Description: This presentation will consist of two parts. Sean will provide an update on the status of The Utah Reference Network Global Positioning System (TURNGPS). Topics will include status of funding for the build out and ongoing maintenance of the system, some of the obstacles discovered while building the network, how the network is currently being used, and the advantages for using RTK to collect and navigate to existing GIS features in the field. Sean will also briefly touch on State Cadastral activities, including the Statewide Parcel Layer and continued progress on improving PLSS data. The second part of the presentation, (Tom) will be focused on practical applications using the TURN GPS system including new hardware solutions that can take advantage of the TURN GPS services.

Title: Using GIS for NPDES Phase II Stormwater Compliance

Presentors: Steven Johnson, GISP & Kasey Hansen of Gateway Mapping

Description: The National Pollutant Discharge Elimination System Phase II rules have been a call to action for many municipalities to improve the quality of stormwater in their communities. This presentation will show how GIS has been used to assist the City of Orem, Utah in meeting all six NPDES minimum control measures (public education, public participation, illicit discharge detection and elimination, construction, post-construction and good housekeeping). In addition, GIS can be used as a central repository for all the data required by the EPA during an audit of a Municipal Separate Storm Sewer System.

Title: Vacant Land Analysis

Presentors: Matt Jarman, South Jordan City

Description: Undeveloped lands can provide valuable information to cities and counties. This information can be used to assess future growth potentials and model impact and other fees. This presentation will discuss simple ways to create and maintain a vacant land layer using your local GIS and some of the valuable information that can be gained from this analysis.

Title: Where To Next? GIS-based Web Applications & Services

Presentors: Matt Peters and Steve Gourley, AGRC

Description: Internet map applications have come a long way in 10 years. Anybody remember when Mapquest, TerraServer, and Map Objects IMS first came on the scene in the late 90's? Well, put away your feather duster cause we're going to skip the reminiscing altogether and focus on the technologies and strategies that are available today and in the coming years and how we can best put them to use.

Topics to be covered include map services, base map services, web map services (WMS), web feature services (WFS), data service and how all this can be leveraged by GIS and non-GIS users and developers. We'll discuss both commercial and open source based solutions.

Title: Utah Geospatial Infrastructure Roundtable

Presentors: GISAC Strategic Planning Steering Committee

Description: This will be an open forum to discuss the draft strategic plan for the Utah Geospatial Infrastructure and provide your input into this roadmap for the future of GIS in Utah. Special attention will be given to the roles that all members of the Utah geospaial community can play in making it happen.

Title: GIS Data and Resources

Presentors: Robert LeClair, ESRI - Denver

Description: This is an ArcView-level workshop to provide an overview of digital data, data types and formats, issues, and where and how to find data. The presentation and exercise will both focus on data that comes with the software. In the exercise, participants will create a map with data from the ESRI Data & Maps CDs, and (perhaps) downloaded from a website. There will also be a brief tour of the Geography Network, and a Website or data clearinghouse.

Title: Introduction to Topology

Presentors: Robert LeClair, ESRI - Denver

Description: GIS analysis is totally dependent on good quality data. Without data that is coincident and connected, many types of analysis from Networks to Overlay simply don't work or give unexpected results. This workshop will introduce you to the fundamentals of Topology in the Geodatabase and how you can effectively deploy and use the topology tools in ArcGIS to ensure you are creating and maintaining good quality data. You will also be introduced to the topology editing tools and how these can be incorporated into your day to day workflow.